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ABSTRACT

A model is proposed for facilitating the application of knowledge to practice in education, constructed around a theory of the use of concepts in the various contexts of professional practice. A definition of the term "educational practice" as it is generally understood is followed by a discussion of concepts as instruments for developing educational theory. The model illustrates a range of contexts within which practical activity occurs, and describes the following relevant contexts: (1) the teacher as an individual; (2) the teaching/learning activity as it occurs in the classroom; (3) the larger context of the school; (4) the professional practice as it occurs within the context of a local educational authority or agency; (5) the context of more formal knowledge; and (6) the context of the wider society. A discussion is presented on how concepts function in the consideration of operational theory in a range of contexts. (JD)

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# A Model for Applying Knowledge to Practice in Education

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# A Model for Applying Knowledge to Practice in Education

Robert N. Grunewald

Generations of scholars have been concerned with the relation of theory in the various disciplines to problems of the workaday world. For at least that long their pupils have dutifully learned the theories and wondered and waited to see how their practice might be thus formed or improved. It is just possible that the problem of the relation of theory to practice will not be solved here. However, as phenomena associated with knowledge become increasingly crucial in the Information Age, it behooves us to keep trying to understand that relationship.

Indeed, there is considerable discussion among scholars in the educational foundations area of a "crisis" in foundational study. Yet, we are not likely to convince our colleagues or the various power structures and regulatory agencies in professional education of the vital role of educational studies unless we can state clearly how our wisdom bears upon the urgent problems of practice.

This present formulation grows out of some several decades of interdisciplinary study, school district experience and university teaching-most of the last few years in "foundations" courses in undergraduate and graduate education. It emerges from a blend of that experience and

the thought of Paul H. Hirst of Cambridge University, though it departs from Hirst's theory at a number of points.[1] It proposes a model for facilitating the application of knowledge to practice in education constructed around a theory of the use of concepts in the various contexts of professional practice. The focus of this presentation will be on the emergent model rather than a critique of Hirst.

## I. Educational Practice

Paul Hirst has been known for several decades as the advocate and interpreter of liberal education, the forms of knowledge, and the academic disciplines. He has in the last few years become convinced that operational educational theory must come, not from the abstractions of the *the disciplines but from principles derived from and tested in successful practice.

In his writing and in a recent personal communication (30 June, 1987) Hirst identifies three "levels" in the practice-theory relationship - (a) practice, (b) practical or operational theory, (c) wider or fundamental theory such as is found in the "disciplines".[2]

But Hirst is primarily interested in discussing the logic and justification of theory. What is missing is an account of the development of theory, which Hirst considers to be an empirical matter. What we need to do is to fill that gap. What is here proposed is not a finished map but a generic outline (perhaps even an agenda).

The term "educational practice" refers to the ongoing activity of teachers, counselors, supervisors, administrators (for example) in the course of their professional duties. This activity occurs as an extension of a person's general life activity into the many immediate situations of a professional practice. Most of the activity in a given situation does not occur at a conscious level but is "tacit" (silent or unnoticed) and extends indefinitely into a related network of events, as would any situation of experience.[3] However, in reflecting on such practical professional activity we can become aware of elements of the more focal events of practice and some features of the context which so affects their progress. This reflection can result in the formulation of "principles of practice." However, to consider the process of reflection and theory development a theory of concept learning is needed.

## II. Concepts as Instrumentalities for Developing Educational Theory

Let us assume a structure of relatively stable elements in experience which can be arranged on a continuum from relatively simple to increasingly broad and complex patterns as is indicated in Figure 1.

Figure 1. A Model of the Role of Concepts in Theory

DATA CONCEPT GENERALIZATION PRINCIPLE THEORY WORLD VIEW

<------Justification Theorizing------>

The individual practitioner comes to the situation of practice with a background of transactions with environment forming a more or less integrated system of dispositions, habits, knowledge, contributing to intelligent action. (This list is not meant to be inclusive of all elements.) That these elements are considered in a framework of action implies that motivation and choice of action alternatives are involved, thus including value components. The person is bombarded with data in the situation of practice. This data transacts with the residual traces of prior experience now organized as elements of language and knowledge. Jerome Bruner's interpretation of concept formation is convenient to describe this process. From processing various data the individual builds enactive, iconic, or symbolic concepts (habits, images, symbols) which group data and enable representations of experience.[4] Because humans share body and mental processes and common experience with others, it is possible to draw upon past social experience organized as concepts in language and as knowledge in various fields of inquiry and practice. Concepts are thus usually words serving key elements in thinking and acting. Concepts may

designate objects, actions or relationships at varying levels of generality. Thus, a particular visual image comes to be designated as Mr. Brown, a man who belongs to the Hilldale school staff. He is a teacher, an educator, a professional, a human being, a primate, mammal, living organism, in increasing orders of generality.

Concepts are organized into sentences to form generalizations, which also reflect various levels of generality. Thus, "Mr. Black likes children," is a generalization of lower order than "Societies tend to form institutions to protect and educate their younger members." Higher order generalizations tested with enough instances to be accorded a considerable degree of stability in experience, knowledge and action can be considered principles. Concepts, generalizations, principles related to a cluster of phenomena can be designated as theory, in a general sense. A pattern of concepts, generalizations, principles and theories provides an orientation toward experience within a society so as to constitute a world view. The process of theory development moves from data and concepts toward generalizations and principles. Some measure of (empirical) justification of principles can be established by the examination of concepts and their supporting data. Knowledge, in this framework, refers to the network of concepts, generalizations, principles, and theories. Intelligence designates the skillful use of the

knowing process in the solutions of life problems. With conserved reflection and considered judgment of the process for the enhancement of life experience, wisdom is possible.

In reflection upon practice, we must necessarily use the concepts available, either to the individual, or with additional communication and learning, to the group of professionals operating in a given context. Many concepts necessary for the reflection and formulation of principles will come from the wider context of life activity, as described above. Each individual experiences a number of contexts from which to draw concepts and generalizations useful for reflection and formulation of practical principles. It is helpful at this point to consider a range of contexts through which such concepts can be used.

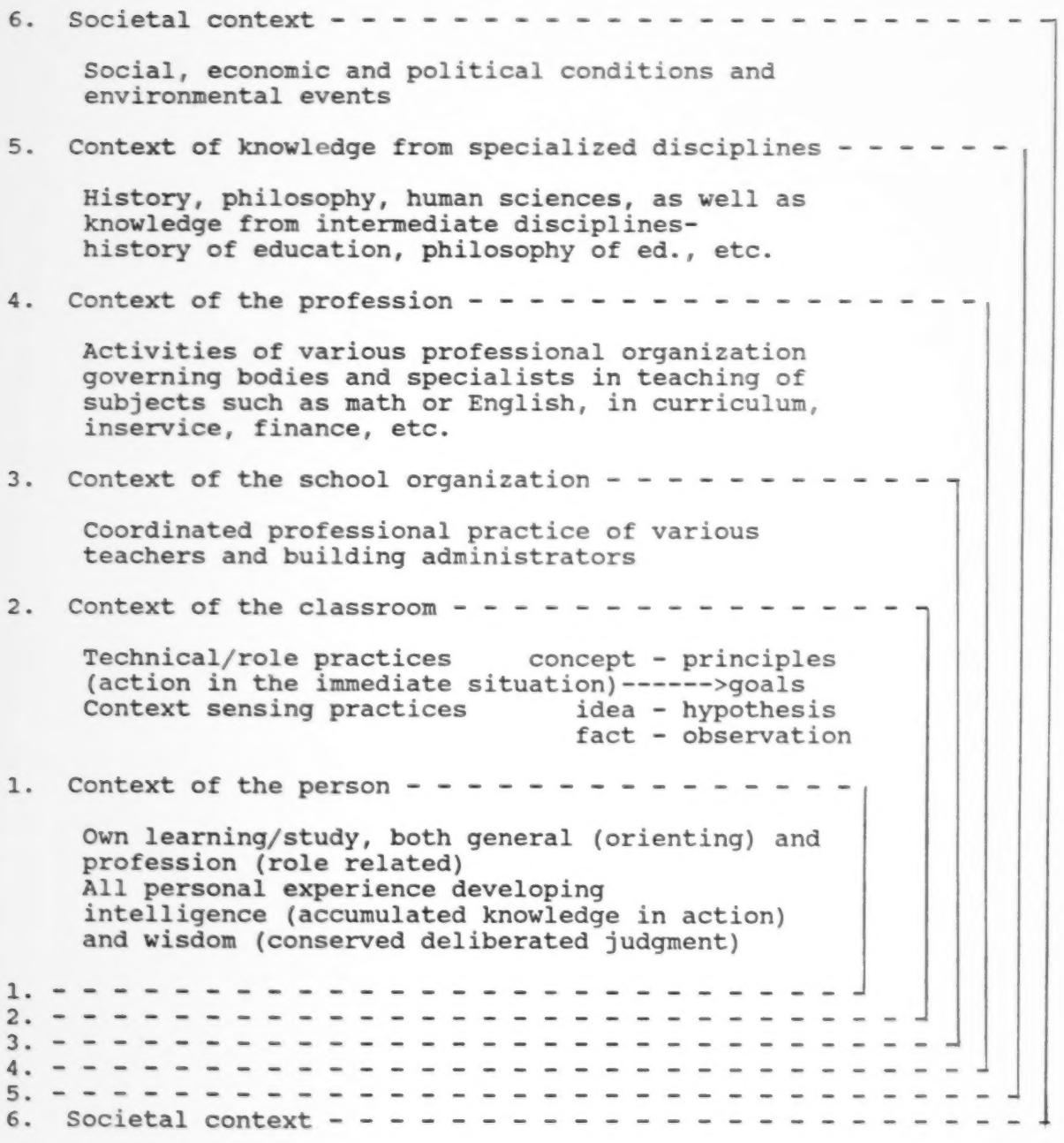
## III. The Contexts of Educational Practice and Theory

### A. The Concept of "Context"

"Context" is used here to designate the indistinct but relevant network of meanings against which an element of educational practice is to be seen as figure against ground. It is intended to designate all the phenomena potentially related to the action being considered. If the event under examination is part of a network of relationships, it is the rest of the network. It refers to a designated set of more or less structured relationships against which the

Figure 2

A Model of Professional Practice


6. Societal context
Social, economic and political conditions and environmental events
5. Context of knowledge from specialized disciplines
History, philosophy, human sciences, as well as knowledge from intermediate disciplines- history of education, philosophy of ed., etc.
4. Context of the profession
Activities of various professional organization governing bodies and specialists in teaching of subjects such as math or English, in curriculum, inservice, finance, etc.
3. Context of the school organization
Coordinated professional practice of various teachers and building administrators
2. Context of the classroom
Technical/role practices
(action in the immediate situation)
Context sensing practices
concept - principles
------>goals
idea - hypothesis
fact - observation
1. Context of the person
Own learning/study, both general (orienting) and profession (role related)
All personal experience developing intelligence (accumulated knowledge in action) and wisdom (conserved deliberated judgment)
1.
2.
3.
4.
5.
6. Societal context

phenomenon under observation is to be seen; for instance, the physical, biological or social context of an event. The term "context" is taken to have more stability in time than the term "situation" which is used to designate all those elements of potential relationship to the progress of the ongoing transactions of organism and environment.[5]

B. A model of the contexts of educational practice

A structure of nesting "boxes" portraying related contexts useful for considering educational theory is proposed in Figure 2. This model presents a range of contexts moving from the person (level 1) and classroom (2) outward toward the larger societal context (6). The contexts presented are representative rather than exhaustive; others could be described. These are not considered to be separated in practice. Practical activity occurs in each context, and practical theory could also be generated at each level.

1. The context of the person

Education is practiced and its principles developed by persons, each of whom has a history of life experiences which have developed a measure of intelligence (accumulated knowledge in action) and wisdom (conserved and deliberated judgment). Both informal experience and more carefully structured experiences in years of formal study have contributed to this development. Of particular interest to the model are the orienting skills by which the individual

takes into account the relevant elements of a context of action, what Hirst would call the "wider commonsense understanding," or "wider capacities for thought and action."[6] These skills, dispositions, understandings form a base for and are infused with more specifically professional elements learned in pre-professional study or in related practical experience. These contribute importantly to the next context.

2. The context of the classroom

The immediate situation of the teaching/learning activity occurs in the context of the classroom. It assumes and overlaps the personal context of the acting professional. The classroom activity can be greatly affected by factors in the personal situation - a particular constellation of attitudes and dispositions, or even a headache. In a particular teaching situation there is a flow of activity intended to attain a network of professional purposes and goals. These include technical or role related practices which tend to follow "principles" or established ways of performing professional activities (methods) as well as context sensing, more general problem solving practices in which concepts and principles from experience transact with the events of the classroom situation in the myriad problems/decisions that make up the teaching process. The

articulation and examination of principles developed in this close relation to practice Hirst sees as operational educational theory.[7]

3. The context of the school

The activity of the individual teacher occurs within the larger context of the school or district organization. Again, there is a flow of activity toward a network of goals of varying definition and consensus.[8] Professional practice at this level is concerned with the coordination of individual and group activity in the utilization of resources to attain goals. Principles developed concerning practice at this level may be followed as informal understandings or formulated more specifically as policies governing the action of the organization. In the U.S., research on effective schools has indicated the importance of the school level organization for improving professional practice.[9]

4. The context of the profession

The professional practice in a particular school occurs within the context of a local educational authority or agency. Actually, there may be several "layers" of such authoritative bodies. Some of these may be agencies of governmental at local, regional, state and national level. Others may be professional associations, unions, accrediting associations, for example. It is important to recognize

that at this level there are various specialists in the teaching of mathematics, English, and other subjects. There are also specialized roles in the development of curriculum, the provision of inservice training, finance, personnel administration, and other functions. These specializations provide opportunity for the reflection and more deliberate study of practices. This level also provides roles which have both opportunity and responsibility to examine operational principles in the light of the disciplines, thus providing a transitional context for the facilitation of "wider theory."

5. The context of more formal knowledge

Those elements of society charged with advancing knowledge in scholarly disciplines from astronomy to zoology constitute another context to be recognized. The activities of scholars and organizations of scholars pursuing knowledge provide a continually growing body of concepts and generalizations of potential interest to professional practice. Organized as professional societies or gathered together in institutions of higher education, scholars in these disciplines assume activities and purposes of their own which may or may not be compatible with professional educational practice at lower levels of schooling.[10] However, they are often associated with instruction at a tertiary or higher education level in which practice shares some elements with other levels of education.

Between the scholarly disciplines and the contexts of professional education are the intermediate disciplines wherein scholars in history or philosophy or sociology, for instance, specialize in the application of the methods and concepts of that disciplines to the phenomena of education. Thus we have philosophers of education, educational sociologists, and such designations. These bridging disciplines operate in much the same way as the main disciplines, which already have divisions of many sorts. Moreover, as the importance of educational institutions to all sectors of society becomes evident, many sociologists, historians, philosophers who would not be classed as members of the bridging disciplines have contributed importantly to the wider context of educational theory. As we turn to discussion of the flow of knowledge among these contexts in education, it is important to keep these intermediate disciplines in mind.

6. The context of society

That professional practice in education occurs in the context of the wider society is at the same time obvious and easily ignored. Economic conditions, the actions of governmental bodies, trends in values and concerns, all impact the educational process in various ways, sometimes subtle, sometimes dramatic. Every teacher must reckon with the flow of societal events, be they days of the week,

holidays, curtailment of resources, or strikes and picket lines. Educational leadership and planning require increasingly sophisticated analysis and awareness of social and economic trends and participation in the political process.

IV. How do concepts function in the consideration of operational theory in a range of contexts?

Individual teachers function in a variety of instructional situations which enable them to use available concepts or generate new concepts and generalizations based on common elements of these situations. These same persons function as faculty of a school and can bring the concepts and generalizations of the classroom to bear upon the activities and practical theory of that range of context. Even if they move to positions as department heads or administrators they use their practical personal and instructional theory to undergird and inform their practical activity and theory at the wider contexts. Likewise, if they become district level supervisors or administrators they can call upon the concepts and generalizations of past experience to inform their practice. Should these people pursue further study or become teachers of other teachers, they do not shed their prior conceptual tools, but refine them and add to them to address the new context of their practice.

Because of this overlapping experience in a range of contexts there is a flow of concepts among contexts. Concepts used in personal practical activity of individual teachers are used in the activity and reflection on teaching. Concepts used by persons in reflection on teaching can also function in reflection on school practice or on practice at district, state, national or societal levels. Thus, there is a "field" of concepts and generalizations available for reflection and testing at the various contextual levels.

The commonalities and continuity of individual experience and practice through a range of contexts facilitates the development and testing of concepts and generalizations of operational theory. The greater the similarities, the more applicable the concepts and generalizations. The more penetrating and versatile the component concepts and generalizations, the more widely applicable is the theory.

However, there are limitations and hazards inherent in the system because of the inevitable differences between the particular situations within a context and among the various contexts. No two teachers have the same background for practical activity or the same conceptual repertoire. Even the same teacher varies in competence from day to day, period to period. The same variation which occurs in teachers also occurs in pupils, further confounding the

possibilities. No two classes are the same in the tacit elements of practice or in the contingent variations between situations and contexts. Hence the need to identify and cultivate among educators the most penetrating and versatile conceptual tools. Hence, also, the need to consider such practical theory as can be generated using those concepts as providing, not universally applicable guides, but hypotheses to be considered in the immediate situations of activity.[11] This goal can be greatly facilitated as educators, from beginning teachers to the most experiences administrators and theorists, using some concept of levels of practice and theory such as Hirst's, understand and practice this generic process. Starting with the problems of their own experience they can recognize the utility of a storehouse of versatile and well grounded conceptual tools to fit the range of contexts of professional practice.

Notes

1. The basic source for Hirst's current ideas of educational theory is his introductory essay in Paul H. Hirst, ed. Educational Theory and Its Foundational Disciplines (London: Routledge & Kegan Paul, 1983). However, his article, "Educational Studies and the PGCE Course" British Journal of Educational Studies, Vol. XXXIII, No. 3, October, 1985, is more specific concerning application to instruction.

2. Hirst, Educational Theory and Its Foundational Disciplines 16ff.

3. Ibid., 13ff.

4. Bruner, Jerome, Toward a Theory of Instruction (Cambridge, Mass.: Harvard University Press, 1966) pp. 44-5.

5. Grunewald, Robert N. "Dewey's Situation and the Ames Demonstrations", Education Theory, Vol. XV, No. 4, October, 1965.

6. Hirst, "Educational Studies . . ." p. 212.

7. Hirst, Educational Theory and Its Foundational Disciplines pp. 16-18.

8. White, Patricia, and John White, "Practical Reasoning and Educational Theory" University of London Institute of Education, mimeographed, no date.

9. Goodlad, John A., A Place Called School (New York: McGraw Hill, 1984.

10. Hirst, "Educational Studies . . ." p. 212.

11. Dewey, John The Sources of A Science of Education (New York: Horace Liveright, 1929) pp. 28-9.